

**INITIAL STATEMENT OF REASONS**  
**FOR**  
**PROPOSED BUILDING STANDARDS**  
**OF THE**  
**OFFICE OF THE STATE FIRE MARSHAL**  
  
**REGARDING THE 2019 CALIFORNIA MECHANICAL CODE,**  
**CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4**  
  
**TRIENNIAL RULEMAKING CODE CYCLE**

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

**STATEMENT OF SPECIFIC PURPOSE, PROBLEM, RATIONALE and BENEFITS:**

(Government Code Section 11346.2(b)(1)) requires a statement of specific purpose of each adoption, amendment, or repeal and the problem the agency intends to address and the rationale for the determination by the agency that each adoption, amendment, or repeal is reasonably necessary to carry out the purpose and address the problem the agency intends to address for which it is proposed. The statement shall enumerate the benefits anticipated from the regulatory action, including the benefits or goals provided in the authorizing statute.)

Health and Safety Code Section 18928:

The specific purpose of this rulemaking effort by the Office of the State Fire Marshal is to act accordance with Health and Safety Code section 18928, which requires all proposed regulations to specifically comply with this section in regard to the adoption by reference with amendments to a model code within one year after its publication.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The Rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies addressed in the 2018 Uniform Mechanical Code and be published as the 2019 California Mechanical Code.

The general purpose of this proposed action is principally intended to update and codify a new edition of the California Mechanical Code (California Code of Regulations, Title 24, Part 4) based upon a more current edition of a model code. The current California Mechanical Code in effect is the 2016 California Mechanical Code which is based upon the 2015 Uniform Mechanical Code of the International Association of Plumbing and Mechanical Officials. This proposed action:

Repeal the adoption by reference of the 2015 Uniform Mechanical Code and incorporate and adopt by reference in its place the 2018 Uniform Mechanical Code for application and effectiveness in the 2019 California Mechanical Code.

Repeal certain amendments to the 2015 Uniform Mechanical Code and/or California Building Standards not addressed by the model code that are no longer necessary.

Adopt new building standards or necessary amendments to the 2018 Uniform Mechanical Code that address inadequacies of the 2018 Uniform Mechanical Code as they pertain to California laws.

Bring forward previously existing California building standards or amendments, which represent no change in their effect from the 2016 California Mechanical Code.

Codify non-substantive editorial and formatting amendments from the format based upon the 2015 Uniform Mechanical Code to the format of the 2018 Uniform Mechanical Code.

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[1]

**CHAPTER 1  
CALIFORNIA ADMINISTRATION  
DIVISION I**

**1.1 – 1.1.12**

The SFM is proposing to maintain the adoption of those existing California provisions contained Sections 1.1 through 1.1.12 with modification.

**1.1.1**

The SFM is proposing to repeal the adoption by reference of the 2015 Uniform Mechanical Code and incorporate and adopt by reference in its place the 2018 Uniform Mechanical Code for application and effectiveness in the 2019 California Mechanical Code.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[1.1]

**1.11.0 – 1.11.10**

The SFM is proposing to maintain the adoption of those existing California provisions contained Sections 1.11.0 through 1.11.10 without modification.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[1.2]

**DIVISION II**

The SFM proposes to not adopt UMC Chapter 1 pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

[2]

## **CHAPTER 2 DEFINITIONS**

The SFM is maintaining the adoption of those existing California regulations or Sections as amended in Chapter 2 without modification. The SFM is proposing adoption of this Chapter as amended pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[3]

## **CHAPTER 3 GENERAL REQUIREMENTS**

The SFM is maintaining the adoption of those existing California regulations or Sections as amended in Chapter 3 without modification. The SFM is proposing adoption of this Chapter as amended pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[4]

## **CHAPTER 4 VENTILATION AIR SUPPLY**

The SFM is maintaining the adoption of those existing California regulations or Sections as amended in Chapter 4 without modification. The SFM is proposing adoption of this Chapter as amended pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[5]

### **CHAPTER 5 EXHAUST SYSTEMS**

The SFM is maintaining the adoption of those existing California regulations or Sections as amended in Chapter 5 without modification. The SFM is proposing adoption of this Chapter as amended pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[6]

### **CHAPTER 6 DUCT SYSTEMS**

The SFM is maintaining the adoption of those existing California regulations or Sections as amended in Chapter 6 without modification. The SFM is proposing adoption of this Chapter as amended pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[7]

### **CHAPTER 7 COMBUSTION AIR**

The SFM is proposing the adoption of Chapter 7 without amendment pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

[8]

### **CHAPTER 8 CHIMNEYS AND VENTS**

The SFM is proposing the adoption of Chapter 8 without amendment pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[9]

### **CHAPTER 9 INSTALLATION OF SPECIFIC EQUIPMENT**

The SFM is proposing the adoption of Chapter 9 without amendment pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[10]

### **CHAPTER 10 STEAM AND HOT WATER BOILERS**

The SFM is proposing the adoption of Chapter 10 without amendment pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

[11]

### **CHAPTER 11 REFRIGERATION**

The SFM is maintaining the adoption of those existing California regulations or Sections as amended in Chapter 11 without modification. The SFM is proposing adoption of this Chapter as amended pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[12]

### **CHAPTER 12 HYDRONICS**

The SFM proposes to not adopt Chapter 12 pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[13]

### **CHAPTER 13 FUEL GAS PIPING**

The SFM is proposing the adoption of Chapter 13 without amendment pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

[14]

**CHAPTER 14  
PROCESS PIPING**

The SFM is proposing the adoption of Chapter 14 without amendment pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[15]

**CHAPTER 15  
SOLAR SYSTEMS**

The SFM proposes to not adopt Chapter 12 pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[16]

**CHAPTER 16  
STATIONARY FUEL CELL POWER PLANTS**

The SFM is proposing the adoption of Chapter 16 without amendment pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[17]

**CHAPTER 17  
STANDARDS**

The SFM is proposing the adoption of Chapter 17 without amendment pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the

protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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[18]

The SFM proposes to not adopt Appendices A through G pursuant to Health and Safety Code Sections 13108, 13113, 13114, 13131.5, 13143, 13143.6, 17921 and 18949.2.

**APPENDIX A  
RESIDENTIAL PLAN EXAMINER REVIEW FORM FOR HVAC SYSTEM DESIGN**

**APPENDIX B  
PROCEDURES TO BE FOLLOWED TO PLACE GAS EQUIPMENT IN OPERATION**

**APPENDIX C  
INSTALLATION AND TESTING OF OIL (LIQUID) FUEL-FIRED EQUIPMENT**

**APPENDIX D  
UNIT CONVERSION TABLES**

**APPENDIX E  
SUSTAINABLE PRACTICES**

**APPENDIX F  
SIZING OF VENTING SYSTEMS SERVING APPLIANCES EQUIPPED WITH DRAFT HOODS,  
CATEGORY I APPLIANCES, AND APPLIANCES LISTED FOR USE WITH TYPE B VENTS**

**APPENDIX G  
EXAMPLE CALCULATION OF OUTDOOR AIR RATE**

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in occupancies that are addressed in the 2018 Uniform Mechanical Code and proposed for publication as the 2019 California Mechanical Code pursuant to Health and Safety Code Section 13108, 13113, 13114, 13131.5, 13143, 17921, and 18949.2.

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**TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

(Government Code Section 11346.2(b)(3)) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).

The SFM did not rely on any technical, theoretical, and empirical study, report, or similar documents outside of those contained in this rulemaking in proposing that CBSC adopt said model code as a reference standard for the placement of existing SFM regulatory amendments for the California Building Standards Codes.

**STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS:**

(Government Code Section 11346.2(b)(1)) requires a statement of the reasons why an agency believes any mandates for specific technologies or equipment or prescriptive standards are required.)

The SFM believes that the amendments to the model code any additional building standards proposed are offered in typically both a prescriptive and performance base. The nature and format of the model code adopted by reference afford for both methods, the following is a general overview of the model codes proposed to be adopted by reference as well as state modifications:

This comprehensive fire code establishes minimum regulations for fire prevention and fire protection systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new system designs.

This code is founded on principles intended to establish provisions consistent with the scope of a building and fire code that adequately protects public health, safety and welfare; provisions that do not unnecessarily increase construction costs; provisions that do not restrict the use of new materials, products or methods of construction; and provisions that do not give preferential treatment to particular types or classes of materials, products or methods of construction.

The International Building, Residential and Fire Code provisions provide many benefits, among which is the model code development process that offers an international forum for building and fire safety professionals to discuss performance and prescriptive code requirements. This forum provides an excellent arena to debate proposed revisions. This model code also encourages international consistency in the application of provisions.

#### **CONSIDERATION OF REASONABLE ALTERNATIVES**

(Government Code Section 11346.2(b)(4)(A)) requires a description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate. It is not the intent of this paragraph to require the agency to artificially construct alternatives or describe unreasonable alternatives.)

The SFM has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons than the proposed adoption by reference with SFM amendments. Therefore, there are no alternatives available to the SFM regarding the proposed adoption of this code.

#### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

(Government Code Section 11346.2(b)(4)(B)) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business.)

The SFM has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons than the proposed adoption by reference with SFM amendments. Therefore, there are no alternatives available to the SFM regarding the proposed adoption of this code.

#### **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.**

(Government Code Section 11346.2(b)(5)(A)) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies to support an initial determination that the action will not have a significant adverse economic impact on business)

The SFM has made a determination that this proposed action will not have a significant adverse economic impact on business. Health and Safety Code Section 18928 requires the SFM, when proposing the adoption of a model code, national standard, or specification shall reference the most recent edition of the applicable model code, national standard, or specification. Therefore, there are no other facts, evidence, documents, testimony, or other evidence on which the SFM relies to support this rulemaking.

#### **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

(Government Code Sections 11346.3(b)(1) and 11346.5(a)(10))

The [STATE AGENCY NAME] has assessed whether or not and to what extent this proposal will affect the following:

- X      The creation or elimination of jobs within the State of California.  
  
          These regulations will not affect the creation, or cause the elimination, of jobs within the State of California.
- X      The creation of new businesses or the elimination of existing businesses within the State of California.  
  
          These regulations will not affect the creation or the elimination of existing business within the State of California.
- X      The expansion of businesses currently doing business with the State of California.  
  
          These regulations will not affect the expansion of businesses currently doing business within the State of California.
- X      The benefits of the regulation to the health and welfare of California residents, worker safety, and the state's environment.  
  
          These regulations will update and improve minimum existing building standards, which will provide increased protection of public health and safety, worker safety and the environment.

**ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS**

(Government Code Section 11346.2(b)(5)(B)(i)) states if a proposed regulation is a building standard, the initial statement of reasons shall include the estimated cost of compliance, the estimated potential benefits, and the related assumptions used to determine the estimates.)

No increased cost of compliance for those regulations that make only technical and non-substantive changes.

The potential benefits provide recognition and appropriate use of new technologies and materials, clarity for the code users and local enforcement agencies, and may increase business due to the adoption of new building standards.

Protection of life and property against fire and panic.

**DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS**

(Government Code Section 11346.2(b)(6)) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues. These agencies may adopt regulations different from these federal regulations upon a finding of one or more of the following justifications: (A) The differing state regulations are authorized by law and/or (B) The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment.)

The SFM has determined that this proposed rulemaking action does not unnecessary duplicate or conflict with federal regulations contained in the Code of Federal Regulations that address the same issues as this proposed rulemaking.